

Remarks

Claims 80-103 are pending in the subject application. Applicants acknowledge that claims 89 and 96-99 and 103 have been withdrawn from further consideration as being drawn to a non-elected invention. Claims 104-107 have been added (support for the newly added claims can be found, for example, at pages 10-11 and page 34, lines 5-10 of the as-filed specification). Claims 80, 95, 99 and 100 have been amended to attend to typographical issues. Entry and consideration of the arguments and claims presented herein is respectfully requested. Accordingly, claims 80-107 are currently before the Examiner with claims 89 and 96-99 standing withdrawn from consideration. Claims 80-88, 90-95, 100-102 and 104-107 read on the elected invention. Favorable consideration of the pending claims is respectfully requested.

Claims 80-88, 90-95 and 102 have been rejected under 35 U.S.C. § 103(a) as obvious over BioNews (2002) as evidenced by Espinosa *et al.* (2001). The Office Action argues:

Claims, 80-81, 86-88, 90-93 and 102 recite a method of treating a solid tumor (species elected: renal carcinoma), comprising the administration of a composition gamma-delta cell activator (species elected: Phosphostim).

For claims, 80-81, 86-88, 90-93 and 102, BioNews teaches a method of treating renal carcinoma with Phosphostim, an activator of T gamma-delta cells.

The statements in claims 80: "in an amount sufficient to induce at least 5-fold increase in the gamma-delta T cell population", claim 81: "wherein said gamma-delta T cell activator is provided in an amount sufficient to induce at least 10-fold increase in the gamma-delta T cell population in a subject", claim 86: "wherein said gamma-delta T cell activator is provided in an amount sufficient to expand the gamma-delta T cell population in a subject to reach between 30-90% of total circulating lymphocytes in a subject", claim 87: "wherein the biological activity of gamma-delta T cells is increased in said subject", claim 90: "wherein the gamma-delta T cell activator is a composition comprising a compound capable of inducing the proliferation of a gamma-delta T cell in a pure population of gamma-delta T cell clones when said compound is present in culture at a concentration of less than 1 mM", are inherent properties of the method developed described in BioNews (i.e. it was already present in the prior art, even though the prior art does not recognize that property) as evidenced by Espinosa *et. al.* Espinosa *et. al.* teach that BrHpp (species elected) increases the gamma-delta T cell population among total T cells in culture up to 20% at 12.5 nanomolar, 30% at 25 nanomolar and 50% at 100 nanomolar (see page 18340, Figure 4 B).

At the time of the invention, it would have been *prima facie* obvious for a person of ordinary skill in the art to combine the teachings BioNews (treating renal cancer with Phosphostim), with the motivation of treating renal cancer, thus resulting in the practice of claims 80-81, 86-88, 90-93 and 102 with a reasonable expectation of success.

Applicants respectfully submit that the Office Action fails to establish that the claimed invention is *prima facie* obvious over the cited combination of references and traverse the rejection of record.

Obviousness requires a teaching or suggestion of all limitations in a claim. *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974)). Additionally, obviousness cannot be predicated on what is not known at the time an invention is made, even if the inherency of a certain feature is later established (*In re Rijckaert*, 9 F.2d 1531, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993)) and the mere fact that a certain thing may result from a given set of circumstances is not sufficient [to establish inherency.]” *In re Oelrich*, 666 F.2d 578, 581-82, 212 U.S.P.Q. 323, 326 (CCPA 1981). In this case, Applicants note that the Espinosa *et al.* reference relied upon in establishing the increase in $\gamma\delta$ T-cells reports on the *in vitro* expansion of $\gamma\delta$ T-cells rather than the expansion of $\gamma\delta$ T-cells *in vivo* nor does the Office Action articulate any rationale as to why one skilled in the art would translate the *in vitro* results reported in Espinosa *et al.* to corresponding results that would be expected to be observed in an *in vivo* setting. As such, it cannot be said the reference establishes that the method described in the BioNews article inherently teaches the limitations argued to be supported by the teachings of Espinosa *et al.* and the cited combination of references fails to establish a *prima facie* case of obviousness for the claimed invention since each of the limitations of the claimed invention have not been taught.

Claims 100 and 101 have been rejected under 35 U.S.C. § 103(a) as obvious over BioNews (2002) as evidenced by Espinosa *et al.* (2001) and further in view of Negrier *et al.* (1998). As noted above, Applicants respectfully submit that a *prima facie* case of obviousness has not been established by the combination of the BioNews press release and Espinosa *et al.* While Negrier *et al.* teach the intravenous administration of IL-2 to individuals having metastatic renal cell carcinoma, the cited reference fails to cure the defects noted above with respect to the combined teachings of the BioNews press release and Espinosa *et al.* Accordingly, it is respectfully submitted that claims 100

and 101 are not obvious over the cited references and invention and reconsideration and withdrawal of the rejection of record is respectfully requested.

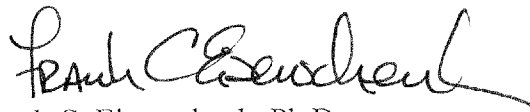
It should be understood that the remarks presented herein have been made solely to expedite prosecution of the subject application to completion and should not be construed as an indication of Applicants' agreement with or acquiescence in the Examiner's position. Applicants expressly reserve the right to pursue the invention(s) disclosed in the subject application, including any subject matter canceled or not pursued during prosecution of the subject application, in a related application.

In view of the foregoing remarks, Applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

Applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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